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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,221	09/11/2003	Roger Nicholas Place	A35977-PCT-USA-A	7705
21003	7590	02/20/2004	EXAMINER	
BAKER & BOTTS 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			SPITZER, ROBERT H	
			ART UNIT	PAPER NUMBER
			1724	

DATE MAILED: 02/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/660,221	Applicant(s) PLACE ET AL.	
	Examiner Robert H. Spitzer	Art Unit 1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/11/03 & 12/10/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. On the drawing figures, there are no letters C,D,E,F,TC1,B1,G1,B2,G2,H or E2 thereon, and letters C and D are used on different figures to show different elements. Applicants are reminded that only like elements can have the same reference designation. Also, on Fig. 11, there is no number 43 thereon and no description in the specification of letter P.
2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 31,32 and 34-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 31 is indefinite because it recites "an adsorbent bed" without any correlation to "an adsorber" previously recited in claim 27. Claim 32 is indefinite because there is no direct antecedent basis for the recitation of "the gas flow through the monoliths". Claim 34 is indefinite because it is not known what is meant by "a gas impervious to plastic". It appears that "to" should be canceled. Claims 37 and 38 are indefinite because there is no direct antecedent basis for the recitation of "the exit gases from the porous carbon monolith". Claim 40 is indefinite because it recites "a plurality of adsorbers" without any correlation to "an adsorber" previously recited in claim 27, and because there is no direct antecedent basis for the recitation of "the exit gases from the adsorbing bed". Claims 35,36 and 39 are indefinite because they depend from the above indefinite claims.

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4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 27-29 and 40-42 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by the structure and process of use of Gadkaree et al. (5,750,026), who clearly show a porous carbon monolith structure for the adsorption and desorption of volatile organic components, which desorption is by electric heating of the carbon monolith. For claim 28, the reference shows a resistivity of 0.10 to 25 ohm.cm. For claim 29, the reference shows a wall thickness of the monolith of 0.1 to 1.3 mm and an open porosity of 0.1 to 70 vol. %.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gadkaree et al. (5,750,026) in view of Park et al. (5,914,294). The claim differs from the process of Gadkaree et al. ('026) in specifying that the surface area of the carbon monolith is "at least 700 m²/g". Park et al. ('294) show that a carbon adsorber can have a surface area of from about "600 to about 2000 m²/g. " (col. 5, lines 5-12), with the surface area and other physical properties of the carbon varying and depending upon

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the application of the carbon. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to utilize a carbon with a surface area of at least 700 m²/g in the process of Gadkaree et al. ('026), because that physical property of carbon is variable and depends upon the application of the carbon.

8. Claims 31-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gadkaree et al. (5,750,026) in view of Yokota et al. (5,110,328). The claims differ from the process of Gadkaree et al. ('026) in there being a plurality of monoliths connected together to make a single adsorber. Yokota et al. ('328) show that a plurality of monoliths can be connected together in series to form a single adsorber (col. 7, lines 29-40). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to structure the monolith of Gadkaree et al. ('026) to be structured of a plurality of series connected monoliths, in view of the showing of Yokota et al. ('328), so that the amount of power needed to operate such monoliths is reduced.

9. Claims 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gadkaree et al. (5,750,026) in view of Yokota et al. (5,110,328), as applied in the paragraph directly above, further in view of Mestemaker et al. (5,628,819). The claims differ from the process of Gadkaree et al. ('026) in there being a granular bed which follows the monolithic adsorber. Mestemaker et al. ('819) show that granular bed 15i is downstream of the main bed which is positioned before it. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to structure the adsorber of Gadkaree et al. ('026) to have a granular bed downstream of the carbon monolith structure, in view of the showing of Mestemaker et al. ('819), so that any

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volatile components which pass through the monolith will also be removed before the feed stream passes out of the device.

10. The remaining references listed on both the PTO-1449 and the PTO-892 show art of interest.

11. Applicants' response to this Office action should also include the following editorial changes: page 9, line 20, "figure 9" should be "Figure 7"; page 12, line 25, "fig." should be "Fig."; page 14, line 5, "fig." should be "Fig."; page 15, lines 13 and 18, "figure" should be "Figure"; page 16, line 13, "figure" should be "Figures", line 14, "fig." should be "Fig.", line 19, "figure" should be "Figure", line 20, "fig." should be "Fig.", and in line 30, "figure" should be "Figure"; page 17, line 21, "figure" should be "Figure"; page 18, line 4, it appears that "thennal" should be "thermal"; page 19, lines 5, 15, 16 and 23, "figure" should be "Figure", and in line 10, "fig." should be "Fig."; page 20, line 1, "fig." should be "Fig."; and on page 21, line 5, "(E3)" should be "44", lines 14, 16 and 22, "fig." should be "Fig.", and in line 15, "a" should be canceled.

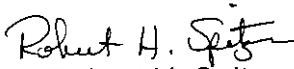
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert H. Spitzer whose telephone number is (571) 272-1167. The examiner can normally be reached on Monday-Thursday from (5:30AM-4:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

February 10, 2004


Robert H. Spitzer
Primary Examiner
Art Unit 1724
February 10, 2004